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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,476	03/16/2004	G.B. Kirby Meacham	60254 (70259)	4112
7590	10/20/2005		EXAMINER	
Peter F. Corless EDWARDS & ANGELL, LLP P.O. Box 55874 Boston, MA 02205			SPITZER, ROBERT H	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,476

Applicant(s)

MEACHAM, G.B. KIRBY

Examiner

Robert H. Spitzer

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 12-15 and 19-24 is/are allowed.
- 6) ☒ Claim(s) 7-11 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-5,12-15 and 19-24 are allowed.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 7-11 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 is indefinite because it recites "barrier surfaces contacted by the oxygen containing gas comprise a noble metal" without any correlation to "at least a portion of the metallic barrier comprises a noble metal" already recited in amended claim 1. Claim 8 is indefinite because it recites "barrier surfaces contacted by the hydrogen containing gas comprise copper or nickel" without any correlation to "at least a portion of the metallic barrier comprises a noble metal". Claim 9 is indefinite because it recites "the metallic barrier comprises ceramic particles selected from the group consisting of: alumina, zirconia, and lanthanum chromite" without any correlation to "at least a portion of the metallic barrier comprises a noble metal" already recited in amended claim 1. Claim 10 is indefinite because it recites "the metallic barrier comprises metal oxide particles including at least one metal selected from the group consisting of: copper, nickel, palladium, platinum, rhodium, iridium, iron, and ruthenium" without any correlation to "at least a portion of the metallic barrier comprises a noble metal" already recited in amended claim 1. Claim 11 is indefinite because it recites "the metallic barrier comprises copper or nickel, and further comprises particles selected from the group consisting of: alumina, zirconia, and lanthanum chromite" without any

Art Unit: 1724

correlation to "at least a portion of the metallic barrier comprises a noble metal" already recited in amended claim 1. Claim 16 is indefinite because it recites "at least a portion of the barrier material is an electronically conductive metal" without any correlation to "a barrier material including at least a noble metal" previously recited in amended claim 12. Claim 17 is indefinite because it recites "a noble metal" without any correlation to the identical recitation in amended claim 12. Claim 18 is indefinite because it recites "at least a portion of the barrier material is an oxide, ceramic or glass" without any correlation to "a barrier material including at least a noble metal" previously recited in amended claim 12.

4. Claims 7-11 and 16-18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

5. As all of the claims have either been allowed or indicated to be allowable, applicant's remarks contained in the October 5, 2005 Amendment are moot and need not be answered by the examiner.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1724

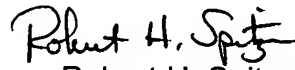
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (571) 272-1167. The examiner can normally be reached on Monday-Thursday from (5:30AM-4:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 18, 2005


Robert H. Spitzer
Primary Examiner
Art Unit 1724
October 18, 2005